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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,646	03/01/2004	Shien-Chang Chen	49458 DIV (71987)	3079

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EXAMINER

JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,646

Applicant(s)

CHEN ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/454,316.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, "the main catalyst", "the promoter", and "the process for producing allyl acetate" lack antecedent basis.

Claim 1 provides for the use of the catalyst in a process for producing allyl acetate, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-22 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-16 are rejected under 35 U.S.C. 102(b) as anticipated by Bartsch US 4,158,737.

Regarding claim 1, Bartsch '737 discloses a catalyst comprising palladium metal as the main catalyst (see column 1, lines 10-15) in the range of 0.5 to 2.0% weight (see column 5, line 41), tin and mixtures of tin with other metals in the range of 0.05 to 0.6% weight as promoter (see column 5, lines 47-55), in combination with an alkali or alkaline earth metal compound (see abstract and column 3, lines 64-68), on the outer surface

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of a porous carrier (see column 3, line 25), being used in the process for producing allyl acetate (see abstract).

Regarding claims 2, 5-8, 11-13 Bartsch '737 discloses tin and mixtures of tin with other metals in the range of 0.05 to 0.6% weight (see column 5, lines 47-55) and the additional metal(s) are claimed alternatively with tin metal.

Regarding claims 3-4, Bartsch '737 discloses palladium metal as the main catalyst (see column 1, lines 10-15) in the range of 0.5 to 2.0% weight (see column 5, line 41).

Regarding claim 9-10, Bartsch '737 discloses alkali or alkaline earth metal compound in the range of 0.5 to 10% weight (see column 5, line 45).

Regarding claim 14-15, Bartsch '737 discloses the alkali and alkaline earth metal carboxylates and the formates and acetates of sodium, potassium, and lithium; potassium hydroxide, acetate, formate, and carboxylates (see column 5, lines 12-13 and 33-39).

Regarding claim 16, Bartsch '737 discloses alumina (see abstract).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 17-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bartsch '737.

Regarding claims 17-19, Bartsch '737 discloses a catalyst comprising palladium metal as the main catalyst (see column 1, lines 10-15) in the range of 0.5 to 2.0% weight (see column 5, line 41), tin and mixtures of tin with other metals in the range of 0.05 to 0.6% weight as promoter (see column 5, lines 47-55), in combination with an alkali or alkaline earth metal compound (see abstract and column 3, lines 64-68), on the outer surface of a porous carrier (see column 3, line 25), being used in the process for producing allyl acetate from an olefinic compound (see abstract). Since the claimed product is the same, it can inherently be used in the same process for making allyl acetate.

When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicant to prove that the subject matter shown in the prior art does not

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possess the characteristics relied upon. In re Fitzgerald et al. 205 USPQ 594. As a practical matter, the Office is not equipped to manufacture or obtain products and make resulting comparisons with the claimed invention. Where, as here, the burden has been shifted to applicant, it is appropriate to make a rejection based upon §102 as well as §103.

9. Claims 20-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch '737 in view of Tacke et al. US 5,808,136.

Regarding claims 20-22, Bartsch '737 discloses a catalyst comprising palladium metal as the main catalyst (see column 1, lines 10-15) in the range of 0.5 to 2.0% weight (see column 5, line 41), tin and mixtures of tin with other metals in the range of 0.05 to 0.6% weight as promoter (see column 5, lines 47-55), in combination with an alkali or alkaline earth metal compound (see abstract and column 3, lines 64-68), on the outer surface of a porous carrier (see column 3, line 25), being used in the process for producing allyl acetate (see abstract). Bartsch '737 further discloses "metal" catalysts (abstract) made by applying the metals by "known methods" and impregnation as a known method (see column 3, lines 16-31 and column 5, lines 26-29).

Bartsch fails to disclose reducing the metals.

Tacke '136 discloses liquid or vapor reduction with hydrazine, hydrogen, or ethylene (see paragraph bridging columns 3-4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the reduction of Tacke in making the vinyl acetate production catalyst of Bartsch because Tacke discloses the reduction in a process for making a catalyst for vinyl acetate (abstract) wherein a higher activity with the same or improved selectivity is achieved (see column 1, lines 56-62) and Bartsch '737 discloses "metal" catalysts (abstract) made by applying the metals using prior art "known methods".

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nicolau et al. US 5,731,457 discloses a product and process for making a catalyst for the production of vinyl acetate comprising impregnation of catalytically effective amounts of Pd, Au, and Cu (abstract), and vapor or liquid reduction with ethylene or hydrazine (see paragraph bridging columns 3-4).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M.

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Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edward M. Johnson
Primary Examiner
Art Unit 1754

EMJ